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ABSTRACT

This paper examines the importance of culturally-specific learning styles within the context of the Kentucky Education Reform Act of 1990. The Act posits that all students can learn, that students learn differently, and that students learn better when they are taught utilizing their preferred learning modalities. A review of the literature indicates that all cultures, communities, and families can be divided into two major dimensions--traditional and modern--in terms of gender roles, family identity, sense of community, family identification, time orientation, age status, importance of tradition, subservience to convention and authority, and spirituality/religion. Teachers need to understand the cultural style of students; to use a proactive approach to reach out to those students whose values and needs differ from the mainstream; to exhort the message that "to be different means to be distinct but not inferior"; and to accommodate students with differing needs and priorities by changing the system, but not forcing them to change. The main body of the document consists of suggestions to help teachers identify learning styles, and to design teaching strategies to impart instruction through their students' preferred learning modes. (Contains 41 references.) (LL)

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Culturally Specific Learning Styles: Some Suggestions for Teachers

By Daya S. Sandhu

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Abstract

This article examines the importance of culturally-specific learning styles in the context of Kentucky Education Reform Act of (1990). Some suggestions are made to help teachers identify learning styles of their students and design their teaching strategies to impart instruction through the preferred learning modalities of their students.

Culturally Specific Learning Styles: Some Suggestions for Teachers

> We do not believe the educational systems needs repairing; we believe it must be rebuilt to match the drastic change needed in our economy if we are to prepare children for productive lives in the 21st century.
>
> (Carnegie Forum on Education and the Economy)

Reform Movements in Public Education

The history of reforms in public education dates back to the Olde Deluder Satan Act of 1647 (Orlich, 1989). Since then, there have been a series of reform acts and efforts at local, state, and national levels in America to provide our students with the best education possible through the best and most efficient ways. Most recently, the recommendations made by the National Commission on Excellence in its celebrate report, A Nation at Risk: The Imperative for Education Reform, has sounded a stunning warning:

> Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is overtaken by competitors throughout the world... What was unimaginable a generation ago has begun to occur- others are matching and surpassing our educational attainments.
>
> (National Commission on Excellence in Education,1983,p.5).

Naturally, the issue of reform in education has become a number one concern in American education and it is one of those rare instances that this concern has captured the public attention for such a long period of time (Nystrand, 1992).

The Civil Rights Movement of the 1960s proved to be another landmark development in the history of the United States which has left deep and long lasting impressions in all walks of life: political, social, economic, and educational. Since the 1960s,

there have been pressing renewed demands for reforms to address the special needs of all ethnic groups in education. So much so that each decade since then has been marked by a new wave of reforms which stands characteristically unique. Briefly, the sixties were a call for "equality", the seventies for "efficiency", the eighties for "excellence', and the nineties for "equity".

Kentucky Education Reform Act 1990: A Guidepost of Bold Initiatives

Many states have attempted to respond to these two major forces in their own unique ways. But Kentucky stands tall in its bold and comprehensive approach to transform the whole public education system. The underlying philosophy of the Kentucky Education Reform Act of 1990 is well described by Lunenburg (1992):

> Designed originally for a different era, a less culturally diverse population, a more cohesive family and social structure and a less complex knowledge-base and economic employment situation, the current educational system has inherent flaws preventing educators from responding effectively to a changing world. The problem is the system itself. A piecework, patchwork approach will no longer work. The educational system needs to be restructured and requires a unified response.
>
> (pp. 11-12)

In its pioneering and comprehensive approach to reform public education, the Kentucky Education Department (1993) proposes that "Classrooms and schools must be altered to prepare students for successful living both in the present and the future. It is not enough to be content with adding bits and pieces of reform ideas to a program already in existence" (p. 15). The uniqueness of KERA is explained by Gregg (1992) who noted that" the extent of today's reform is more expansive than previous reform efforts. It

involves a fundamental rethinking of the educational system, based on a common vision of effective schools and high expectations for student performance" (p.1).

Significance of Learning Styles in KERA

The preceding introduction is provided as an historical and broad based philosophical background to delineate the role of learning styles, especially culturally specific learning styles for Kentucky teachers. Specifically, the importance of culturally specific learning styles is rooted in two thoughts of KERA guided beliefs,

1. All children can learn at high levels...
2. Effective instruction facilitates learning and it ...employs a variety of effective techniques to address learning diversity.

(Transformations: Kentucky's Curriculum Framework, 1993 Vol.1, p. ii).

Furthermore, in its suggestions to transform the learning environment, Kentucky Department of Education is very explicit to emphasize the significance of learning styles:

> The identification of preferred learning modalities- auditory, visual, and kinesthetic- provides teachers with additional insights into ways to design learning experiences. Using strategies which encompass different learning modalities assists teachers in personalizing instruction for all students.
>
> (Transformations: Kentucky's Curriculum Framework, 1993 Vol.II, p. 11).

Incidentally, these beliefs are consistent with three premises I pointed out about learning styles in my other article in this publication. Namely,

a. all students can learn
b. students learn differently
c. students learn better when they are taught in their specific learn styles

A Review of Literature Related to Learning Styles

A concern about effective teaching and learning dates back to the days of Greek philosophers such as Socrates, Plato and Aristotle. A very simple paradigm of teaching and learning processes can be diagramed as,

Teacher Subject matter Student

Historically, educators and theoreticians have placed emphasis on these three interacting variables. Traditionally, if a student fails to learn, s/he is held responsible for the failure. Different reasons are given. A failing student could be unmotivated, lazy, and in some cases even considered, "learning disabled." On the other hand, it is interesting to note that we have paid very little attention to the "teaching disability" of some teachers. There is a radical departure now from the traditional view according to KERA. According to KERA, "The heart of transformation is accepting that all students can learn at high levels-higher than has ever been expected of most students" (Kentucky Education Department, vol. II, p. 4).

Historical Perspectives:

An overview of learning styles literature, reveals too many classifications, concepts and interchangeably used confusing terms. For this reason, I feel that a short historical overview with definitions is important here.

a. Cultural Styles:

Ramirez and Castaneda (1974) maintain that based on their

cultural styles, all cultures, communities, and families can be divided into two major dimensions: traditional and modern. A comparative summary of different characteristics of people on these two dimensions follows:

Domain	Traditional Environments	Modern Environments
1. Gender Roles	Distinct & defined	Flexible boundaries
2. Family identity	Strong family identity	Strong Individual identity
3. Sense of community	Strong sense of community	Emphasis upon individuality
4. Family identification	Strong family loyalty	Strong individual identity
5. Time orientation	Strong past and present time orientation	More oriented toward the future
6. Age status	Associate increasing age with increasing wisdom	Vitality of youth is valued
7. Importance of tradition	Value traditional ceremonies	View traditions as barriers to progress
8. Subservience to convention & authority	Respect for conventions and the authority	Encouraged to question authority
9. Spirituality and religion	Emphasize spirituality in life events	Emphasis on science and secularism

Adapted from Manuel Ramirez III (1991). Psychotherapy and counseling with minorities: A cognitive approach to individual and cultural differences. New York: Pergamon Press.

Suggestion for Teachers:

There is a general consensus in the literature that students from

Euro-American cultures primarily subscribe to the values listed under "modern environments" while people from other cultures mostly practice the values and priorities of "traditional environments." This distinction is important for teachers to understand the value system, world views, and behaviors of their students in the context of their specific cultural backgrounds.

Examples: 1. A student from a "traditional environment" may not take much interest in a subject that prepares one for a profession which is generally dominated by members of the other sex.

2. A student coming from a "traditional environment" may never question the teacher, because she has been taught to be subservient to authority.

What a teacher needs to do?

1. Understand the cultural style of the students.
2. Use a pro-active approach to reach out purposefully to those students whose values and needs differ from the mainstream.
3. Exhort the message that "to be different means to be distinct but not inferior."
4. Accommodate the students with differing needs and priorities by changing the system, but not forcing them to change.

b. Cognitive Styles:

According to Messick (1976),

> Each individual has preferred ways of organizing all that he sees and remembers and thinks about. Consistent individual differences in these ways of organizing and processing information and experience have come to be called cognitive styles. (pp. 4-5).

Identification of Cognitive Styles:

The origin of cognitive styles can be indirectly attributed to the classical experiments performed by Witkin (1977) and his associates through the body-adjustment test (BAT) and the rod-and frame test (RFT). It is beyond the scope of this paper to discuss in details these tests. However, for our purpose, it should suffice that the researchers concluded that there are two main types of individuals: field independent and field dependent. Field independent persons approach the environment analytically while field dependent individuals tend to experience events globally (Messick, 1976). Identification of field independent and field dependent individuals is much more simplified through the use of simple embedded test. In this test, the subject is asked to identify a simple figure in a more complex pattern. The field independent people can easily identify the given figure while field dependent people fail to do so.

Anderson (1988) has compared the characteristics of field independent and field dependent individuals in context of school tasks and environments as follows:

Cognitive Style Comparison

Field-Dependent Relational/Holistic Affective	Field-Independent Analytic Non-Affective
Characteristics	Characteristics
1. Perceive elements as a part of total picture.	1. Perceive elements as discrete from their background
2. Do best on verbal tasks.	2. Do best on analytic tasks.

3. Learn material which has a human social content and which is characterized by fantasy and humor.	3. Learn material that is inanimate and impersonal more easily.
4. Performance influenced by authorizing figures expression of confidence or doubt.	4. Performance not greatly affected by the opinions of others.
5. Style conflicts with traditional school environment.	5. Style matches up with most school environments

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Journal of Teacher Education (1988) p. 7.

Impact of Culture on the Development of Cognitive Styles:

Child rearing practices within different cultures and ethnic groups have a direct impact on children becoming a field dependent or a field independent. Witkin and Goodenough (1981) state succinctly:

> Child rearing practices that encourage separate autonomous functioning foster the development of differentiation, in general, and more particularly, of a field independent cognitive style. In contrast, child rearing practices that encourage continued reliance on parental authority are likely to make for (sic) less differentiation and a more field-dependent cognitive style.
>
> (pp. 81-82).

There seems to be a general agreement in professional literature that minorities in America typically exhibit characteristics of field-dependence (Anderson, 1988; Cohen, 1969; Messick, 1976; Ramirez, 1973 ; Witkin & Berry, 1975).

Several authors argue that most American schools reflect a field independent style which is not attuned to the world views and field-dependent style of minority population (Anderson, 1988; Bennett, 1990; Cohen, 1969; Hale-Benson, 1986).

Suggestions for Teachers:

Teachers are urged to recognize their both field-dependent and field-independent students and take their special needs into consideration before designing and implementing their curriculum and teaching strategies. Teachers will find observation guidelines developed by Castaneda and Gray (1974) very useful to impart instruction which is responsive to the specific learning styles of their students.

Examples: For field-dependent students, teachers should tailor instructional activities which permit them to work together in a group. It may require transformation in curricula to shift from competitive learning to cooperative learning (Spady, 1988). Teachers should intentionally display expressions of warmth and acceptance. On the other hand, field independent students should be given the opportunity to compete with others for individual recognition.

C. Learning styles:

Keefe (1979) defines learning styles as:

> Learning styles are characteristic cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. (p.4)

It is important to note that learning style are different from the cognitive styles in that a learning style is a broader term that includes affective styles and physiological styles in addition to cognitive styles (Keefe, 1979). Simply stated, cognitive styles are the preferred ways how information is processed, while learning

styles are the preferred conditions under which the information is received. If cognitive styles are placed under the rubric of nature, learning styles can be placed under the rubric of nurture. However, in their most recent definition of learning styles Dunn and Dunn (1992) have apparently combined both nature and nurture stating that "Learning style is a biological and a developmental set of personal characteristics that make the identical instruction effective for some students and ineffective for others" (p.4).

Impact of a Culture on Learning Styles:

After an extensive review of literature, Worthley (1987) has summarized the following five cultural factors from various sources that influence the learning styles:

1. Socialization process: The more control over the children is exercised by parents, the more field dependent they become.
2. Socio-cultural tightness: The less pressure is placed on people to conform to the social customs, the more field independent they become.
3. Ecological adaptation: The perceptual skills are developed in people according to the degree they use their particular sensory modalities. For example, in the societies where keen observation of the environment is necessary for survival, most of the people become visual.
4. Biological Effect: Dawson (1967) argues that biological factors also contribute to the development of specific cognitive styles. His study concluded that the children who lack protein tend to become field dependent.

5. Effect of language: Visual nature of written languages mostly used in modern literate societies influence the people to become more visual. The people who are not literate or belong to the societies where communication takes place orally, are less visual but more auditory.

Identification of Individual Learning Styles:

The seventies and eighties have witnessed a mushroom growth of instruments designed to assess the learning styles of various age group students. Cornett (1983) has prepared a very informative annotated bibliography of 30 such instruments which is indispensable for any one who is interested in this topic. This annotated bibliography consists of four affective style instruments, six perceptual modality instruments, ten cognitive style instruments, and ten multidimensional instruments. The readers are urged to review these instruments and select those which may serve their purpose best. Since it is beyond the scope of this paper to discuss the properties of all these instruments, only one instrument is discussed below.

The Learning Style Inventory (LSI) by Dunn, Dunn, and Price:

Several authors (Bennett, 1990; Griggs & Dunn, 1989; Keefe, 1982; Reiff, 1992) concur that LSI being a multidimensional inventory is one of the most widely learning style instrument used in elementary and secondary schools. The LSI as a comprehensive instrument has also a distinct advantage over other bipolar instruments to measure the most elements of one's learning style (DeBello, 1990). It has commendable validity and reliability when compared with

nine other available instruments of its kind (Curry, 1987). The LSI has 104 dichotomous items, a sort of self-report questionnaire which takes approximately 30 to 40 minutes to complete (Dunn & Dunn. 1992).

The answers may be scored and analyzed either by hand or by computer. The LSI computer program generates individual profiles and group summary data.

There are several dimensions under which learning elements are classified as follows:

> Environmental stimuli (sound, light, temperature, design;
> Emotional stimuli (motivation, persistence, responsibility, structure);
> Sociological stimuli(peers, self, pair, team, adult, varied);
> Physical stimuli (perception, intake, time, and mobility);
>
> (Reiff, 1992, p. 26)

Another stimuli, called psychological is added which identifies additional elements listed as (global, analytic, hemisphericity, impulsive and reflective). In its final version, LSI measures 21 elements.

Significance of Learning Styles:

Several researchers report that academic achievement is enhanced and attitudes are improved when teaching styles are matched with the learning styles of the students (Dunn, K., & Dunn, R. 1987; Dunn, R.,1988; Dunn, R., Beaudry, J; & Klavas, A.,1989; Dunn, R.,& Bruno, A., 1985) ; Lemmon, P., 1985).

Moreover, there is an overwhelming body of research compiled in an annotated bibliography (1993) published by Learning Styles

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Network which suggests that students learn more easily, learn better, achieve more, and remember things for a longer period of time if they are taught through their individual learning styles.

Could Learning Styles Be Culturally Specific :

Theoretically speaking, the answer is "yes". Since most learning style elements are developed through experience, all cultural factors, compiled by Worthley (1987) and discussed above should influence the formation of one's learning style. The rationale behind this premise is the notion that different ethnic groups have different socialization practices and undergo different ecological adaptations. Even the biological factor relating to protein intake may also influence the various ethnic groups differently.

"The notion that certain learning styles are related to certain ethnic groups is both dangerous and promising" (Bennett, 1990, p. 139). It is promising as it gives us hope to strengthen the academic achievement of culturally diverse students by teaching them in their preferred modalities and making learning environments more conducive. However, there is a major concern that this notion may also create some stereotypes for ethnic groups. Teachers must be aware of this problem of labeling and remember that there are as many within group differences as between group differences among various ethnic groups.

Culturally Specific Learning Styles: Some Research Studies:

There is a critical shortage of empirical studies in this area. A few studies conducted to compare learning styles of different

ethnic groups seem to suggest that there are such differences and they do matter if we are to provide responsive instruction.

For example, Griggs & Dunn (1989) administered the LSI to 4,562 students in 40 schools nationwide and found that:

1. Sequential processing skills: Whites scored higher than blacks
2. Verbal spatial preference: Blacks scored higher than whites
3. Pattern recognition: Whites scored higher than blacks
4. Visual perceptual preference: Asian Americans scored higher than blacks
5. Auditory: Blacks scored higher than others. (p. 148).

* Only first five out of 18 significant elements are quoted here.

A Summary of Other Research Findings:

Dunn, Gemake, Jalali, & Zenhausern, 1990 found significant differences between African Americans and Chinese Americans on 15 scales out of 21 scales of the LSI. Jacobs (1987) compared the learning styles of African Americans and European Americans and reported differences on six scales. For example this study reported that high achievers African Americans were highly teacher motivated, while average achievers preferred to learn through auditory modality. Also, Jacobs found that more European Americans preferred bright light than African American students. Jalali (1989) reported that African American children have significantly higher preference for kinesthetic modality than Greek American children.

Significant differences were reported between the learning styles of Asian Americans and European Americans in a study conducted by Lam-Phoon (1987). Sims (1989) reported significant learning styles differences between African Americans and European

Americans. For example African Americans preferred sound, warmth, less structure, informal seating design, etc., more than the Euro-Americans.

In my own study, conducted in the South Louisiana, significant learning style differences were found among various ethnic groups. The following profiles are prepared after administering the LSI to 35 Acadian American, 20 African American 20 European-American, and 21 Native American adolescents:

1. Acadian Americans (Cajuns):

   Are usually nonconforming; they do not like to do something because some one asks them to. They prefer late afternoon as their best time for studies. They like frequent breaks and prefer mobility in their task.

2. African American Adolescents:

   Work best under very bright light. They prefer specific directions/ explanations before starting or completing a task. Feel more comfortable when someone with authority or special knowledge is present. They can learn best when initially listening to a verbal instruction such as a lecture, discussion, or routine. They are also highly tactile who feel a strong need to keep their hands busy when they are thinking hard. Since they are highly kinesthetic, they require whole body movement and/ or real life experiences to absorb and retain material to be learned. They want to achieve to please their parents or parent figure.

3. European Americans

   Prefer to study with peers through discussions and interactions. They may easily learn alone. They need variety as opposed to routines. Their primary perceptual strength is visual. They can easily recall what has been read or observed. They often eat, drink, chew, or bite objects while concentrating. They prefer evening as the best time for study.

4. Native Americans

   Prefer surroundings that are quiet, warm, and informal. Once a task is begun, they are persistent to complete it,

without taking any breaks. This group prefers late morning as their time for studies.

(Sandhu, 1991, p. 27)

Suggestions for Teachers:

Teaching that is responsive to individual learning styles warrants re-examination of teaching styles. As teachers, we have a tendency to teach according to our own convenience through our own learning style modalities. After a number of years, traditional teaching still continues which consists of the following typical elements (Marshall, 1991):

* students in row
* quiet learning environment
* formal classroom design
* teacher dominance
* whole-group instruction
* textbook/lecture format
* learning by looking/ listening
* low/no mobility
* paper and pencil emphasis

(p. 225)

In order to personalize instruction, it is indispensable that teaching and learning processes are restructured. In this effort all students, especially culturally different students, should be empowered through their specific learning styles to help them achieve academic equity. Dunn and Dunn (1987) have tried to dispel outmoded beliefs about student learning which I think are very important for the readers to challenge traditional teaching and re-structure their classroom environment and teaching styles.

For example, briefly stating Dunn and Dunn (1987) contend that

students don't necessarily learn better if they are:

* seated upright at a desk
* placed in an absolute quiet environment
* studying in well-illuminated area
* sitting still
* participating in a whole-group instruction
* self-motivated

Practical Guidelines:

After reviewing each student's profile, teachers and administrators should improvise and implement several strategies which are necessary to meet each student's special learning needs. Some of these strategies, as suggested by Dunn and Dunn (1992), include:

1. Redesign Classrooms into Multi-instructional Areas:

Redesigning of classrooms can be useful to accommodate the learning preferences of students taking into account their special needs related to three major areas identified on the LSI as "physiological," "environmental," and " sociological." For example, some areas in the classroom may be used for independent learning, others for group study, and group discussions. Some areas may have bright light, others dim; some areas may be warmer than others; and in some areas, eating and drinking may be permitted. There could be some quiet areas, and in some areas listening to music can be allowed. Some sections can be designed for close supervision and the others with no supervision. Similarly, some areas in the classroom can be used where students can sit informally on the carpet if it is difficult for them to sit in hard wooden chairs. Since most of the minority students are field-dependent, teachers should make special arrangements to place them in the area designed for group study.

2. Teaching Global and Analytic Students:

It is important for teachers to examine their own teaching styles. If a teacher's own teaching style is global, most likely the analytic

students in the class will not learn easily from this teacher, vice versa, if a teacher's teaching style is analytic, this teacher may not facilitate learning for those students who learn better globally. For this reason, it is important that the teachers use both methods, global and analytic, if they hope to teach successfully all students in the class.

3. Using Small Group Techniques

After the students are diagnosed on the sociological elements that they prefer to learn with their peers, they must be assigned to small instructional groups. Students who have been mostly directed by their teachers or parents in the past, may also benefit because this arrangement should give these students opportunity to take initiatives and make their own decisions (Dunn & Dunn, 1992). Small groups techniques are specially useful for culturally different students who are mostly field dependent (Anderson, 1988) and prefer to learn with others.

4. Using Learning Activity Packages

The ideas about individualized instruction for regular students and individualized education plans (IEP) for special education students are not new. Most of the teachers are also familiar with learning activity packets (LAPS) since the 1960s. But the idea of teaching responsive to individual and culturally specific learning

styles is something new that teachers should seriously consider to incorporate as another dimension to the educational plans of their students.

Dunn and Dunn (1992) have suggested a large variety of learning packages that can meet the special learning styles needs of the students. Some of these learning packages and techniques include:

a. Programmed Learning Sequences

These programmed materials are designed for those students who prefer to study independently without the directions of adults. Teachers should include multi-media materials to address the needs of visual, auditory, and kinesthetic students. Students can be helped through several small-group techniques, such as "Team Learning, Circle of Knowledge, Group Analysis, Case Study, Simulation, and Brainstorming" (Dunn & Dunn, 1992, p. 198).

Programmed Learning Sequences are specially useful for those students who are self-motivated, persistent, and take responsibility.

b. Contract Activity Packages & Multisensory Instructional Packages

The Contract Activity Packages are specially useful for nonconforming and above average or gifted students. Moreover, these packages permit the students to work at their own pace. For example, the advanced students don't have to wait and get bored, they can move on to the next instructional activity when they are finished.

Multisensory Instructional Packages (MIPs) can be used with

those students who are not persistent and would like to take breaks frequently. These MIP's permit such students to work through several sensory channels of their choice, making them more interested in their work. The culturally different students can also benefit from MIPs because they are able to use their own culturally specific learning styles from multisensory approaches which are available to them.

To conclude, it is interesting to note the comments from Lemmon (1985), a principal in Kansas who have already implemented a new program at her elementary school according to the theory of learning styles:

> The students can sit on the floor, eat during classes, and take tests at their best time of day. And it works! ... We have better test scores, happier students and parents, and a more positive school atmosphere. Learning styles do make a difference" p. 25-29.

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